

REMARKS

Claims 1-14 are pending. By this Response, claims 1 and 6 are amended and claims 11-14 are added. Reconsideration and allowance based on the above amendments and following remarks are respectfully requested.

The Office Action rejected claims 1-10 under 35 U.S.C. §102(b) as being anticipated by Seto, et al. Publication No. JP 10-293569A. This rejection is respectfully traversed. The Examiner alleges that Seto teaches each of the claimed elements. Specifically, the Examiner alleges that Figs. 5, 6, 8 and 9 of Seto provide each of the claimed features. Applicant respectfully disagrees.

Seto discloses an image development and manipulation system which allows for manipulation of an arrangement of characters. Specifically, Seto provides the ability to place characters at various angles on a display. In accomplishing the above, the system of Seto first determines a semi-circular arch path for which the characters will be placed around. Three (3) positional points $P_s(X_s, Y_s)$, $P_e(X_e, Y_e)$, $P_q(X_q, Y_q)$ are determined. A fourth determinate $O_c(X_c, Y_c)$ which is the centric coordinate of the proposed circular arch is determined from the position points P_s and P_e . From the centric coordinate and the positional points, a half circle or an arch is symmetrically determined through each of the positional points. Once the arch is determined, each character is separately manipulated, each in a different manner, so that the characters can be placed around the arch path. The characters are

manipulated by changing the slant orientation or size of the character so that, depending on the placement of the character, the character exactly matches the arch path. For example, the character toward the positional points P_s and P_e will have a higher degree of slant than a character which is positioned at point P_q . Further, the slants of the characters at position P_s and P_e are opposite since these characters are positioned at opposite ends of the arch path. See Figs. 5, 8 and 9(a) - 9(c); column 4, lines 34 through column 5, lines 1-32 and column 7, lines 12-50 through column 8, lines 1-27.

By contrast, the present invention allows for the display of a series of characters at a specific angle and position on a display device. The characters are individually processed at the dot pattern level so that each dot pattern of each character and each character series is located in the correct position. It is the ability of the present invention to determine a position of each individual dot pattern in each character that allows the system and the method of the present invention to achieve an accurate and given placement of the character which is visually acute. The characters are displayed without any deformations, such as expansion or reduction, therefore no further calculations are required to display the character correctly after the display positions are calculated. Thus, the present invention allows devices such as personal computers or navigational instruments in which characters of a fixed size are utilized, to operate without extensive calculations being performed prior to displaying characters.

The present invention is different from the word processing device of Seto. The system of Seto performs only a display position related calculation and not a coordinate calculation. Further, the system of Seto must rely upon an arch path in placement of characters. Furthermore, the characters themselves are represented within a box frame and manipulated based on the arch path so that the box frame corresponds to the arch path. The position of the characters are not calculated at the dot pattern level based on the desired display angle, reference position and proximal reference positions, as accomplished in the methods of the present invention. Also, the present invention does not rely upon a arch path to determine the placement of characters at various positions on the display. Characters, by means of the device and methods of the present invention, may be displayed at any angle at any position on the display device, independent of where other characters may be displayed.

The system of the present invention only needs to perform one calculation, which is a coordinate calculation in order to display a fixed size character having an arbitrary slope without having the problems of dot pattern deformation. The system of Seto does not provide these advantages.

Therefore, Seto fails to teach or disclose, a recording means, recording dot patterns and proximal reference points of each character of a character series; a coordinate calculation means obtaining said proximal reference points of each character of said character series from the recording means and

calculating a display position of each character from a display angle, display reference position and the proximal reference point of the character series and is display means obtaining a dot pattern calculator for each character of the character series from the recording means and displaying each character based on a calculated display position of each character calculated by the coordinate calculation means, as recited in claim 1, and similarly recited in claim 6.

Thus, in view of the above, the rejection under 35 U.S.C. §102 is improper as Seto fails to teach each and every aspect of the claimed invention. Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

CONCLUSION

For at least these reasons, it is respectfully submitted that claims 1-14 are distinguishable over the cited references. Favorable consideration and prompt allowance are earnestly solicited.

Should the Examiner believe that anything further is necessary in order to place this application in condition for allowance, the Examiner is invited to contact the applicant's representative at the number listed below.

Appln. No. 09/731,850

If necessary, the Commissioner is hereby authorized in this, concurrent, and further replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the Claims:

Please amend the following claims.

Claim 1. (Amended)

A character display device comprising:

a recording means recording dot patterns and proximal reference points of each character of a character series;

a coordinate calculation means obtaining said proximal reference point of each character [comprising a] of said character series from said recording means and calculating a display position of each character from a display angle, display reference position and said proximal reference point of said character series; and

a display means obtaining a dot pattern for each character [comprising a] of said character series from said recording means and displaying each character based on a calculated display position of each character [at a display position] calculated by said coordinate calculation means.

Claim 6. (Amended)

A method of character display comprising the steps of:

obtaining a [said] proximal reference point of each character [comprising said] of a character series;

calculating, through a coordinate calculation means, a display position of each character from a display angle, display reference position and said proximal reference point of said character series;

obtaining a dot pattern for each character [comprising] of said character series; and

displaying each character based on said calculated [at a] display position of each character calculated by said coordinate calculation means.

Claims 11-14 have been added.